

Work Order ID 139459

139459

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Monday, November 30, 2015 11:44:19 AM

Item ID: D2563 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Step Weldment Assembly
 Start Date: 12/3/2015 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 12/10/2015 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: MLJ Date: DEC 01 2015 Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2563	Rev C								

100 Large Fab 0.00
 100 2 JAN 25 2016 DAS 24 9-89
 Large Fab Memo 0.02
 Large Fab 1-Cut D2244 to 89.70" at 34 deg as per dwg D2563

- 2-Deburr ends
- 3-Weld (1 END CAP, LUG PLATES & MOUNTING ANGLE) as per dwg D2563 using DT 8343
- 4- Grind

110 QC9- Inspect visual per QSI004- Fusion Welds 0.00
 110 ② 1601.25 DAS 9 9-89
 QC Memo 0.00
 Quality Control

B139459 (X2)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				OTHER : ☐			

Work Order ID 139459***139459***

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Monday, November 30, 2015 11:44:19 AM

Item ID: D2563

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Step Weldment Assembly

Start Date: 12/3/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 12/10/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Weld per dwg A/R Aluminum rod Batch: <u>131562</u>	0.00				<u>2</u>		<u>JAN 25 2016</u>	<u>DAS</u> <u>24</u> <u>9-00</u>
150									
Large Fab	Memo	0.02							
Large Fab									
	1-Inspect for foreign object per QSI 024								
	2-Weld Remainig End cap as per Dwg D2563 using DT 8343								
	3-Grind								
160	QC10- Inspect visual per QSI004- ground welds	0.00							
160						<u>(2)</u>	<u>16-01-25</u>	<u>PD</u>	
QC	Memo	0.00							
Quality Control									
170	QC5- Inspect part completeness to step on W/O	0.00							
170						<u>(2)</u>	<u>16-01-25</u>	<u>PD</u>	
QC	Memo	0.00							
Quality Control									

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause		FAULT CATEGORY																							
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Revision ID: Stop *NS2*

Item Name: Step Weldment Assembly

Start Date: 12/3/2015 Start Qty: 2.00 *2*

Required Date: 12/10/2015 Req'd Qty: 2.00 *2*

Reference: Cust Item ID: Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
175	Pressure Wash per QSI005 4.3	0.00				2	0	15-01-25	838
175	HandFinish	0.00							
Hand Finishing	Memo Touch up Alodine as per QSI005								
180	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00				2	0	15-01-26	838
180	Powdercoat	0.00							
Powder Coating	Memo Touch up Alodine then Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3								
	START TIME: 8:10								
	OVEN TEMPERATURE: 320								
	FINISH TIME: 8:40								
190	Wing Walk as per dwg QSI005 4.4 Batch N1133-7060					x2	0	16-01-26	838
190	HandFinish	0.02							
Hand Finishing	Memo								

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Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
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Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :			
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Picklist Print

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Parent Item: D2563

D2563

Parent Item Name: Step Weldment Assembly

Start Date: 12/3/2015

Required Date: 12/10/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:G 02.07.31 Re-format Location RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2244-116		Manufactured	No			100	Each	104.0000	1	2			DAS
D2244-116									**			JAN 25 2016	24 9-89
STEP EXTRUSION													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		104							
				117818		104				2			
				WA003		-0.0000368							
D2561		Manufactured	No			100	Each	7.0000	2	4			DAS
D2561									**			JAN 25 2016	24 9-89
Lug													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA003		7							
				131074		7				3			
D2564		Manufactured	No			100	Each	10.0000	2	4			DAS
D2564									**			JAN 25 2016	24 9-89
Mounting Angle													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA003		10							
				133497		10				4			
D2673-34		Manufactured	No			100	Each	56.0000	1	2			DAS
D2673-34									**			JAN 25 2016	24 9-89
End Plate													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA003		56							
				136241		30				2			
				137283		13							
				137769		13							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

Picklist Print

Page 2

Monday, November 30, 2015 11:44:19 AM

Work Order ID: 139459

139459

Parent Item: D2563

D2563

Parent Item Name: Step Weldment Assembly

Start Date: 12/3/2015

Required Date: 12/10/2015

Start Qty: 2.00

Required Qty: 2.00

D2673-34

Manufactured No

150

Each

56.0000

1

2

D2673-34

JAN 25 2016

DAS

24

9-88

End Plate

Location

Loc Qty

Loc Code

WA003

56

136241

30

137283

13

137769

13

Monday, November 30, 2015 11:44:19 AM

Shop Packet Print

Page 2

JAN 25 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

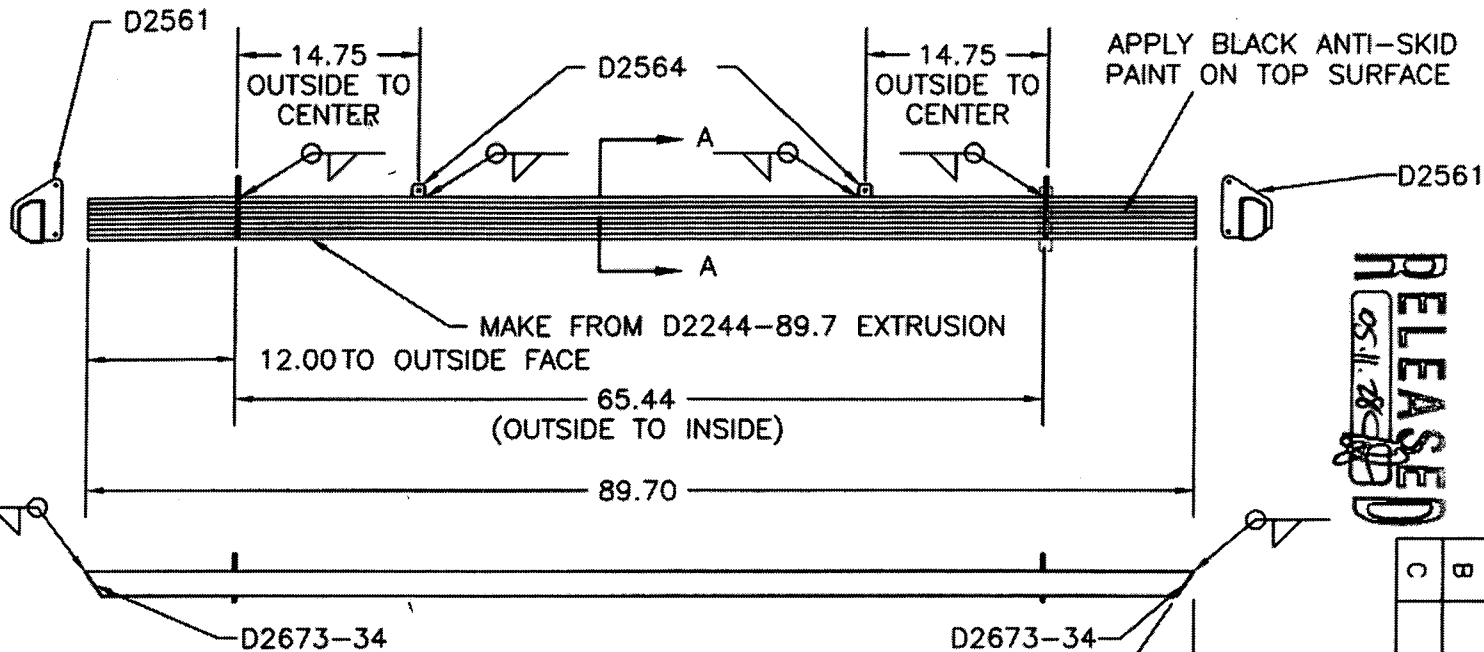
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				OTHER :							



RELEASED
05.11.2000

DESIGN		DRAWN BY		DART AEROSPACE LTD	
BW		Bt		HAMKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.		REV. C	
dl	dl	D2563		SHEET 1 OF 1	
DATE		TITLE		SCALE	
05.11.14		STEP WELDMENT ASSEMBLY		1:15	
A	96.04.26	NEW ISSUE			
B	97.05.14	END CAPS CHANGED (WAS D2248)			
C	05.11.14	UPDATE NOTES			



D2563 STEP WELDMENT ASSEMBLY PARTS LIST

Part No.	Description	QTY
D2563	STEP WELDMENT ASSEMBLY	X
D2244-89.7	EXTRUSION*	1
D2561	LUG PLATE	2
D2564	MOUNTING ANGLE	2

*cut per drawing

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

139459 MJS
15-12-01

D2563 STEP WELDMENT ASSEMBLY NOTES

- 1) MAKE FROM EXTRUSION D2244
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
MASK OFF 0.50 ON EACH SIDE OF D2561 LUGS BEFORE
APPLYING BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED